Apparently these excited individuals wish a fair combat between the operator and the dog.

Regarding the present agitation in the United States, some of our readers object to our speaking of the factitious side. As far as we are able, however, we print the most important news in whatever direction it may strike. Many people genuinely oppose vivisection, but few, if any, of them have the least standing in the scientific world. The New York County Medical Society was instrumental in having the *Herald* legally prevented from carrying certain medical advertising, and that paper seldom forgets a grudge. Moreover, this agitation happens to be extremely good business. The most profitable part of a daily paper is the drygoods advertising; women are the buyers; and in this howl about our dumb friends there is a mighty feminine appeal, especially to those women who are unfortunate enough to have no children. It is more vivid to proclaim in a half-inch headline, "See the bloody knife. It cuts. It cuts," than it is to talk about a reduced death-rate. Only two qualities are needed to conduct a first-class crusade, like the *Herald's* present picturesque effort—a slight knowledge of mob psychology and a short memory. The *Herald* may have forgotten that in 1895 it espoused the cause of antitoxin, started a fund for its popularization with a gift of $1,000, and, with its brass band of publicity, induced the community to give $7,000 more. To be sure, the generosity of the *Herald* flagged at this point, and a representative of the warm-hearted newspaper asked if the original $1,000 could not be returned!—*Collier's Weekly.*

## *CURRENT NOTES ON METEOROLOGY AND CLIMATOLOGY*

### MONTHLY WEATHER REVIEW

Recent issues of the *Monthly Weather Review* (U. S. Weather Bureau, Washington, D. C.) have contained many contributions of general scientific interest. Among these, the following are selected for special mention. In the September number (dated December 16) we find, under the title "On Atmospheric Currents at Very Great Altitudes," a discussion, by Professor C. C. Trowbridge, of the atmospheric currents which are shown to exist in the extreme upper regions of the atmosphere by the observed drifting of the luminous trains formed by meteors. One method for determining the height of the atmosphere is by means of meteors. This paper gives many facts of interest, and is illustrated. "Studies of Frost and Ice Crystals," by W. A. Bentley. A continuation of a paper in the August *Review*. Mr. Bentley has made a life-long study of snow crystals, and presents details of extraordinary accuracy. "Colliery Explosions and Barometric Pressure." Note on the fact, many years ago pointed out by the English Commission on Prevention of Explosions in Collieries, that the combustible gases escape most freely into mines when the external pressure is falling and lowest.

The *Monthly Weather Review* for October, 1907 (dated January 21, 1908), contains the following contributions: "Highest Kite Flight at Mount Weather, Va." On October 3, 1907, the altitude above sea level reached by the leading kite and the meteorograph is believed to be the greatest yet attained in any kite ascension, viz., 23,110 feet. "Interconversion of Centigrade and Fahrenheit Scales"; formulæ suggested by F. K. Ferguson, superintendent of schools, Paola, Kansas, as follows:

$$C = 5/9\ (F + 40) - 40,$$

$$F = 9/5\ (C + 40) - 40.$$

"Studies of Frost and Ice Crystals," by Wilson A. Bentley. "Meteorological Stations in Southern Nigeria," by C. F. Talman. Mr. Talman has, for some time past, performed a very useful service to climatologists in publications of the meteorological stations in various countries concerning whose climates we as yet know but little. In the present article he gives an account of the development of meteorological observations in southern Nigeria, with a map showing the location of the stations. "The Lagging of Temperature Changes at Great Heights behind those at the Earth's Surface, and Types of Pressure Changes at Different Levels," by H. H. Clayton. This is a preliminary report upon some results derived from a study of the records obtained with

sounding balloons launched from St. Louis. The detailed discussion will appear in the *Annals* of the Harvard College Observatory. "Our Present Knowledge regarding the Heat of Evaporation of Water," by Professor A. W. Smith. "Studies on the Vortices in the Atmosphere of the Earth," by Professor F. H. Bigelow. This paper deals with the application of the theory of vortex motion to the funnel-shaped waterspout at Cottage City, Mass., August 19, 1896.

The November, 1907, number (dated February 10, 1908) contains the following contributions: "Phenomena connected with the San Francisco Earthquake," by Dr. C. M. Richter and Professor A. G. McAdie. Reference is made to the fact that the writers "have no record of any detonation coming from the ground"; that they "have no proof whatever that any particular optical or electrical phenomenon occurred preceding, during or following the earthquake." At the time of the San Francisco earthquake there was a well-defined high over practically the entire area of the United States. There were no unusual features connected with the wind, or with other meteorological elements. "It was a pleasant spring day." Dr. Richter and Professor McAdie believe that the clouds which have been reported over the San Francisco fire (see SCIENCE, November 14, 1906, and April 5, 1907) showed no features that can not be explained as smoke effects. "Well-marked Foehn Effects with Great Diurnal Ranges of Temperature in Southern California," by Professor A. G. McAdie. A foehn effect on November 29 and 30, and on December 1 gave maximum temperatures between 80° and 86°, while the morning temperatures were so low that frost was reported in many places. This range, of about 50°, is a very unusual one in southern California. "The Relation of the Movements of the High Clouds to Cyclones in the West Indies," by John T. Quin. This is the continuation of a previous discussion in the *Monthly Weather Review* for May, 1907. "Studies of Frost and Ice Crystals," by W. A. Bentley. "The Winds of the Lake Region," by Professor A. J. Henry. This is an important paper, on a subject which has received little attention. It deals with the seasonal wind directions (with charts); the average velocities, and with high winds. "Influence of Vegetation in Causing Rain." A brief discussion, by the editor, as to the possible effects of soils, bare and covered with vegetation, upon rainfall. R. DEC. WARD

## *THE CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING*

MR. ANDREW CARNEGIE has added $5,000,000 to the endowment of the Carnegie Foundation in order that retiring allowances may be provided for professors in state universities.

| UNIVERSITY | Date of Founding | No. in Faculty | Student Registration | Receipts, 1906 | Entrance Requirements |
|---|---|---|---|---|---|
| Georgia | 1785 | 23 | 408 | 82,642 | 11 |
| N. Carolina | 1789 | 36 | 870 | 235,603 | 11.6 |
| Tennessee | 1794 | 27 | 695 | 88,390 | 10 |
| S. Carolina | 1801 | 19 | 296 | 41,730 | 5.2 |
| Ohio (Athens) | 1804 | 22 | 1272 | 135,198 | 12 |
| Indiana | 1820 | 49 | 1684 | 152,138 | 15 |
| Miami | 1824 | 36 | 991 | 97,472 | 14 |
| Virginia | 1825 | 35 | 706 | 111,094 | 8.4 |
| Alabama | 1831 | 17 | 491 | 56,053 | 10 |
| Michigan | 1837 | 113 | 4136 | 451,697 | 14 |
| Missouri | 1840 | 85 | 2072 | 366,111 | 15 |
| Iowa | 1847 | 53 | 1815 | 432,304 | 15 |
| Mississippi | 1848 | 17 | 571 | 144,704 | 11 |
| Wisconsin | 1848 | 119 | 3571 | 804,521 | 14 |
| Utah | 1850 | 30 | 1063 | 159,007 | 10.7 |
| Louisiana | 1860 | 27 | 458 | 65,214 | 9.5 |
| Washington | 1861 | 43 | 925 | 149,345 | 15 |
| Kansas | 1864 | 88 | 1706 | 391,778 | 15 |
| Maine | 1867 | 28 | 687 | 41,900 | 13.5 |
| W. Virginia | 1867 | 36 | 1422 | 138,660 | 12.5 |
| California | 1868 | 116 | 4173 | 727,536 | 15 |
| Illinois | 1868 | 156 | 4074 | 825,107 | 14 |
| Minnesota | 1868 | 90 | 3955 | 345,261 | 15 |
| Nebraska | 1869 | 84 | 2914 | 357,060 | 14 |
| Ohio State | 1870 | 92 | 2157 | 628,000 | 14 |
| Arkansas | 1872 | 36 | 1528 | 143,900 | 10 |
| Oregon | 1876 | 19 | 506 | 117,200 | 15 |
| Colorado | 1877 | 31 | 1327 | 140,000 | 15 |
| South Dakota | 1882 | 24 | 381 | 68,750 | 15 |
| North Dakota | 1883 | 18 | 733 | 177,250 | 13 |
| Texas | 1883 | 43 | 1991 | 289,193 | 11.4 |
| Nevada | 1886 | 23 | 254 | 130,000 | 12 |
| Wyoming | 1886 | 18 | 241 | 26,081 | 14 |
| Idaho | 1889 | 16 | 363 | 96,537 | 15 |
| Arizona | 1891 | 13 | 226 | 32,200 | 15 |
| New Mexico | 1891 | 8 | 89 | 29,615 | 15 |
| Oklahoma | 1892 | 19 | 475 | 85,000 | 15 |
| Montana | 1895 | 15 | 289 | 57,000 | 14 |
| Florida | 1904 | 14 | 136 | 57,710 | 9.9 |